

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Quinn, Liam B. et al	§	
Serial No. 09/768,072	§	Confirmation No.: 2497
Filed: January 23, 2001	§	Group Art Unit: 2618
For: WIRELESS ANTENNA SWITCHING	§	Examiner: Pan, Yuwen
SYSTEM	§	
	§	

REPLY BRIEF PURSUANT TO 37 C.F.R. §41.41

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Paper is submitted pursuant to 37 CFR §41.41 as a Reply Brief to the Examiner's Answer, mailed on January 22, 2007.

1. Background and Introduction

The rejections in this application are based on a combination of three references: (1) U.S. Patent No. 6,560,443 to Vaisanen et al (Vaisanen); (2) U.S. Patent No. 5,844,189 to Yamazaki et al (Yamazaki); and (3) U.S. Patent No. 6,577,500 to Paredes et al (Paredes). In the Appeal Brief, Applicants argue that:

Independent claim 1 recites, in part,

a switch capable of differentiating communication signals and **prioritized** choosing, **based on one of power being used to transmit, and power being received on a particular channel** of an appropriate transceiver from the set of transceivers to communicate for the computing system (emphasis added).

In paragraph 3 of the Final Office action dated August 4, 2006, the Examiner states, in connection with claim 1, that "Vaisanen discloses...a switch capable of differentiating communication signals and determining and choosing an appropriate transceiver from the set of transceivers to communicate for the computing system (see figure 1, column 6 and lines 36-

53).” Notably, the Examiner fails to address the limitations of claim 1 reproduced above in boldface type; namely, prioritized choosing based on one of power being used to transmit and power being received on a particular channel. The cited portion of the text of Vaisanen (column 6, lines 36-53) states:

FIG. 1 illustrates the principle of the present invention in accordance with a first embodiment of the present invention in which 10 represents as mobile terminal such as a mobile (cellular) phone having a dual antenna, dual transceiver arrangement which can be, for example, an IP-based WLAN/Bluetooth hand-held terminal. The basic idea is to switch one of the two WLAN diversity antennae ANT1 and ANT2 for BT (Bluetooth) use, when BT needs to be functional. In general, BT connection is effected when the hand-held terminal is located outside the available coverage of WLAN. As the WLAN radio communication is the preferred method, WLAN coverage of an AP (access point) can be constantly monitored, while the BT radio (BT module) 12 is in use. Simultaneous operation is limited to the receive (rx) mode of the WLAN radio (WLAN module) 11 when the BT radio (BT module) 12 is operational, either in the receive (rx) or the transmit (tx) mode, in order to protect the BT transceiver from permanent damage.

Vaisanen clearly fails to teach or suggest the claimed limitations. There is absolutely no mention or teaching in the cited portion of Vaisanen of any sort of “prioritized choosing”, which feature finds support in Applicants’ specification at least at page 9, lines 11-16.

In response to the Applicant’s argument, the Examiner stated that (copied verbatim including grammatical and/or typographical errors):

The Examiner believes that it is sufficient to teach the meaning of ‘prioritized choosing’ a long as one of the conditions is satisfied and taught by the prior art of the record.

In addition, the appellant utilizes the ‘or’ statement – on one of- as in claim 1, from the examination point of view, it would be sufficient for a complete rejection as long as one of the conditions is satisfied. Thus, the Examiner selected the latter one, which switch or choose one over the other based on the received power.

Clearly, the Vaisanen reference (column 6, lines 36-53) teaches that when the receiving power of one channel that is for WLAN is so weak . . . the Bluetooth would kick in while it is available for the user terminal and the corresponding Bluetooth transceiver would be switched to the proper antenna via the switch. The Examiner believes that such teaching also anticipates the sample description of appellant’s support for the addressed claim language (see appellant’s specification page 9 and line 11-16).

The Examiner goes on to state that he believed he had addressed prioritized choosing, "at least satisfying the former condition in which switch based on the transmission power (see final office action filed on 01/13/2005, page 3)." In that Office action, the Examiner points to the following text portion of Vaisanen as teaching the subject limitation:

Although there are some minor drawbacks resulting from losses when switching from the second antenna, which is a diversity antenna shared between WLAN and Bluetooth, for example, the benefits arising as a result of using the low powered/low range Bluetooth radio, clearly, outweigh any such drawbacks. In this connection, the present invention features a scheme in which one of the two WLAN diversity antennae is switched for Bluetooth radio use when the Bluetooth radio needs to be functional. In general, the second transceiver, for example, the Bluetooth radio, is connected to the antenna port assigned thereto when the mobile terminal is physically outside the coverage area of the WLAN radio. Because the WLAN radio would typically be the preferred choice of communication linkage, in a mobile terminal where one of the transceivers is a WLAN and the other is a BT radio, the WLAN coverage can be monitored during the time the second transceiver, for example, the Bluetooth radio, is in use. During this time, the first transceiver is coupled at its receiver port to the first antenna monitoring an access point (AP), the access point becoming available through that one of the diversity antennae which is not being used by the Bluetooth radio.

Vaisanen, Column 5, lines 14-26 (emphasis added).

The Examiner states that "Vaisanen clearly teaches that the switching is based on the transmitting power of one particular wireless protocol. The mobile terminal might switch to Bluetooth because it's low power/low range or switch to WLAN as to be typically the preferred choice of communication linkage because of its higher power/wider range."

2. Argument

As previously stated, Vaisanen fails to teach, suggest, or render obvious at least "prioritized choosing based on one of power being used to transmit and power being received on a particular channel" as required by claims 1 and 15. The Examiner's response to Applicants' argument as set forth in the Reply Brief, as summarized hereinabove, is not persuasive on that issue. On the contrary, the text of Vaisanen cited by the Examiner teaches, at best, that one type of communication linkage may be preferable for a particular configuration of a mobile terminal. This teaching neither rises to the level of, nor renders obvious, "prioritized choosing, based on one of power being used to transmit, and power being received on a particular channel" as required by independent claims 1 and 15.

Moreover, Yamazaki and Paredes fail to remedy the deficiencies of Vaisanen and the Examiner has made no argument to the contrary.

3. Legal Precedent

As the PTO recognizes in MPEP §2142:

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The USPTO clearly cannot establish a *prima facie* case of obviousness in connection with the amended claims for the following reasons.

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains ... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, the references, alone, or in combination, do not teach the invention as a whole.

Therefore, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and a rejection under 35 U.S.C. §103(a) is not applicable.

There is still another compelling, and mutually exclusive, reason why the references cannot be combined and applied to reject the claims under 35 U.S.C. §103(a).

The PTO also provides in MPEP §2142:

[T]he Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. ...[I]mpermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Here, the references do not teach, or even suggest, the desirability of the combination.

Thus, neither of these references provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103(a) rejection of the claims.

In this context, the MPEP further provides at §2143.01:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (emphasis in original)

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In the present case it is clear that the USPTO's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to the claims. Therefore, for this mutually exclusive reason, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and the rejection under 35 U.S.C. §103(a) is not applicable.

4. Conclusion

In view of the foregoing, it is respectfully submitted that the claims are fully supported by the specification and that the various combinations of references fail to teach or suggest the subject matter of claims 1-5, 8-13, 15, 17 and 19-21. For all of the foregoing reasons, it is respectfully submitted that claims 1-5, 8-13, 15, 17 and 19-21 be allowed and a prompt notice to that effect is earnestly solicited.

Respectfully submitted,



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